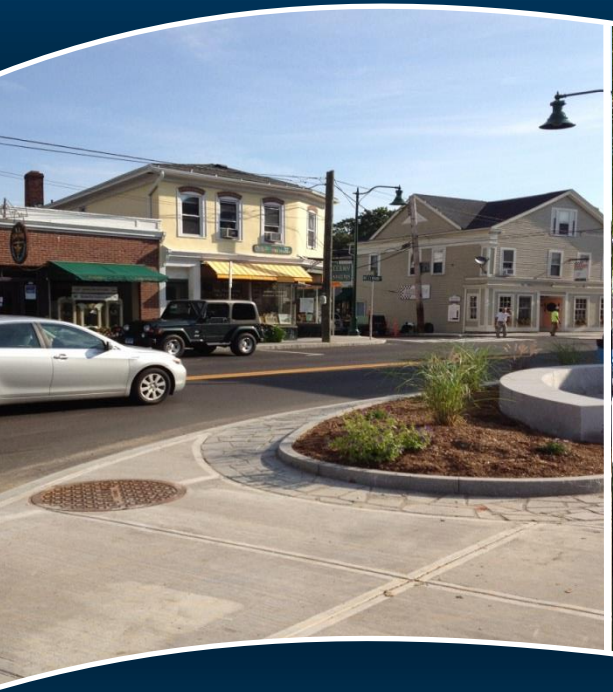
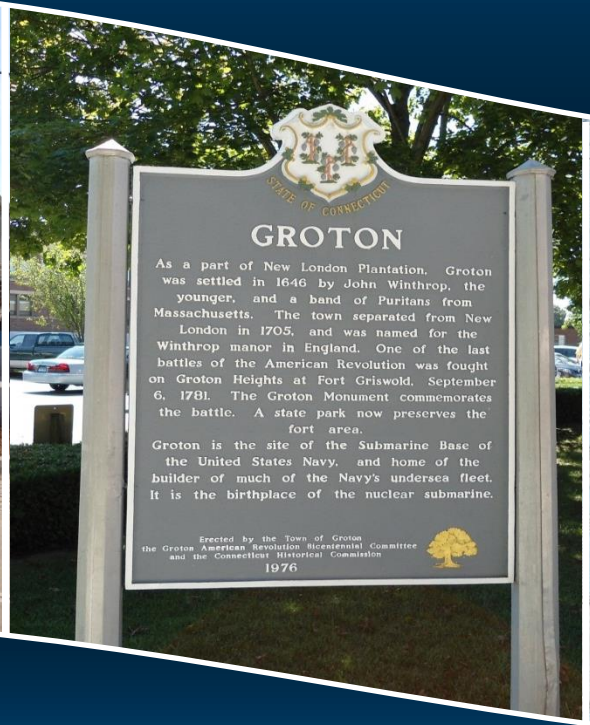
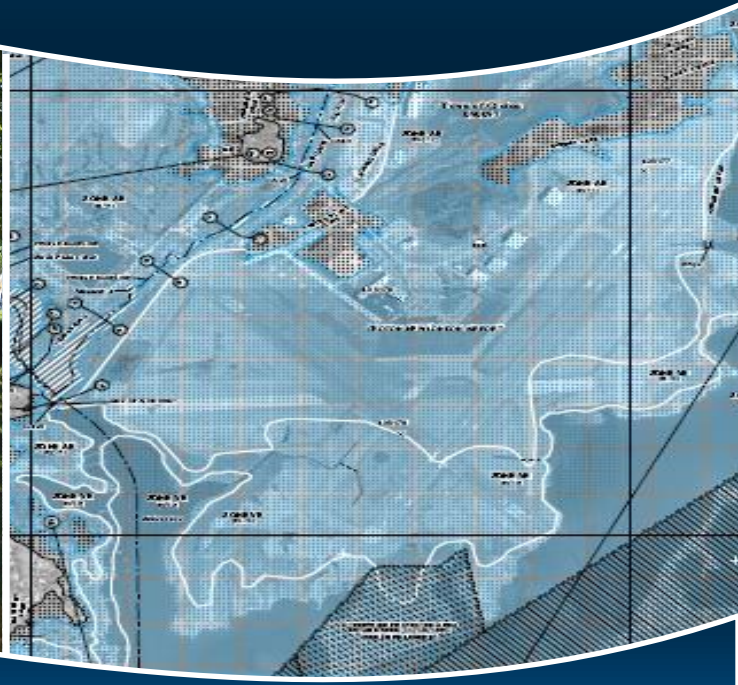
2013 Town of Groton
Plan of Conservation & Development
& Municipal Coastal Program
Municipal Coastal Program







October 24, 2013

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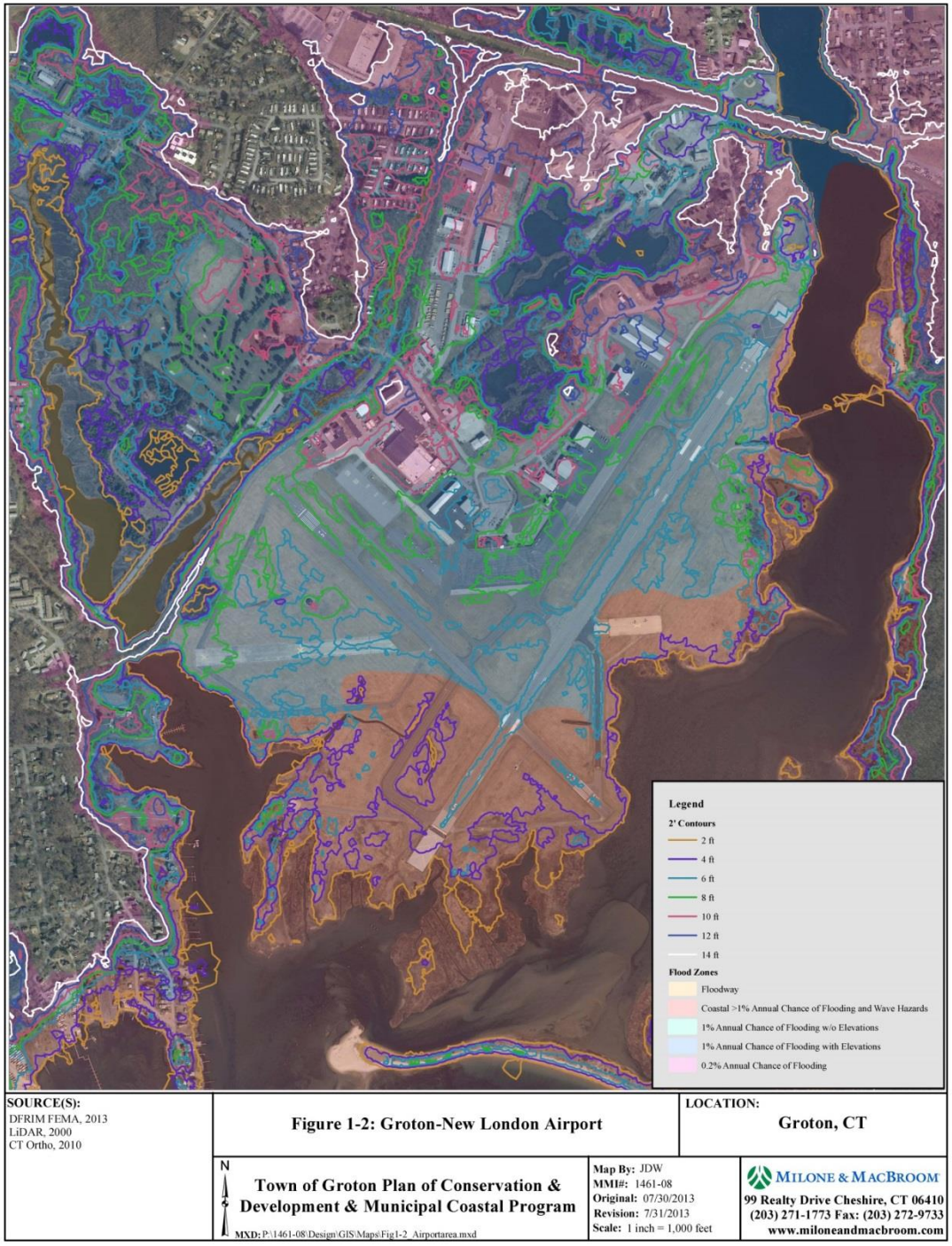
Coastal Management Discussion – Coastal Resilience Focus

- **Review of Area Plans**
  - **Airport**
  - **Esker Point**
  - **Mystic**

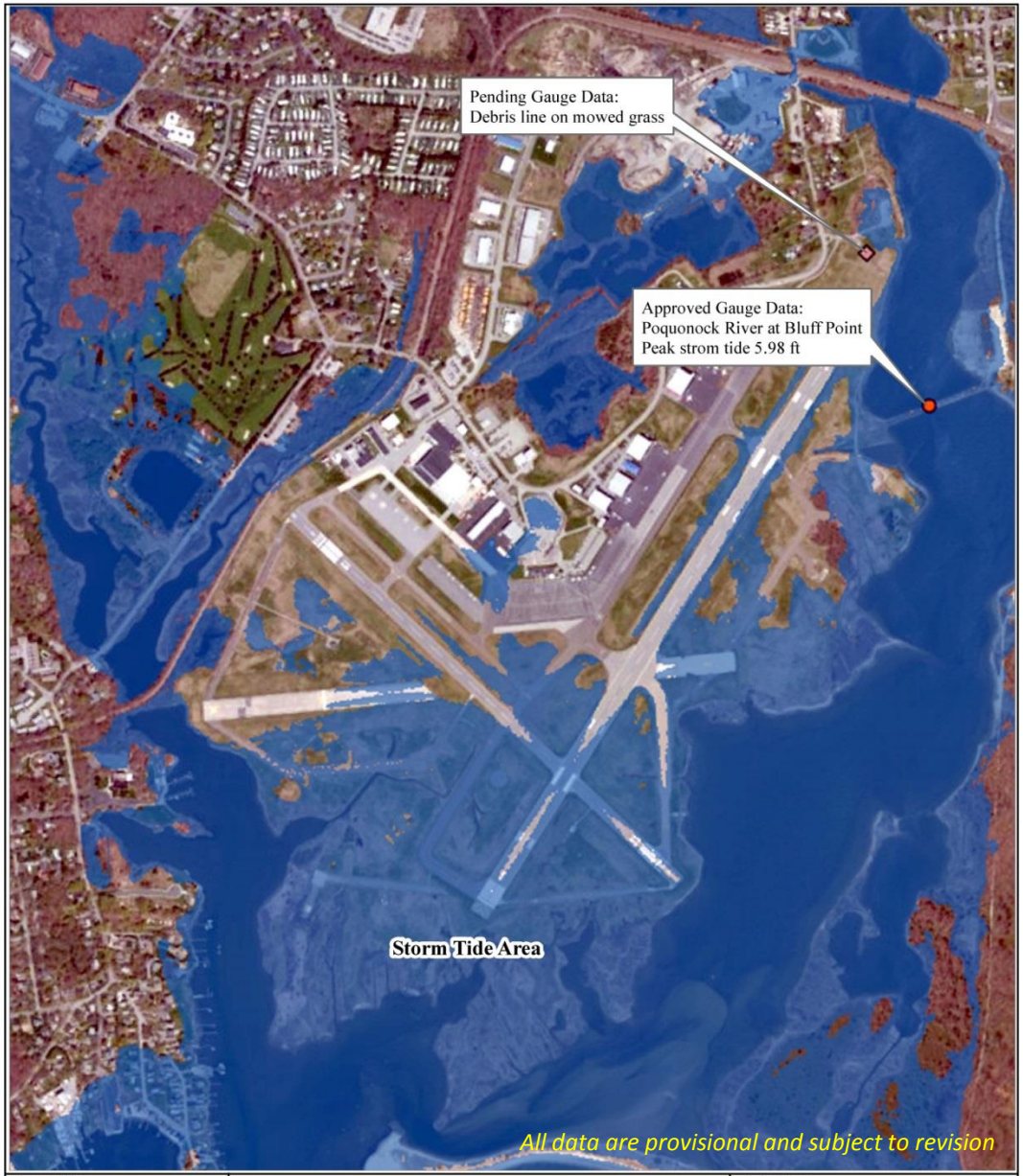
Airport Area

Airport LiDAR & FIRM



Airport – Sandy Inundation

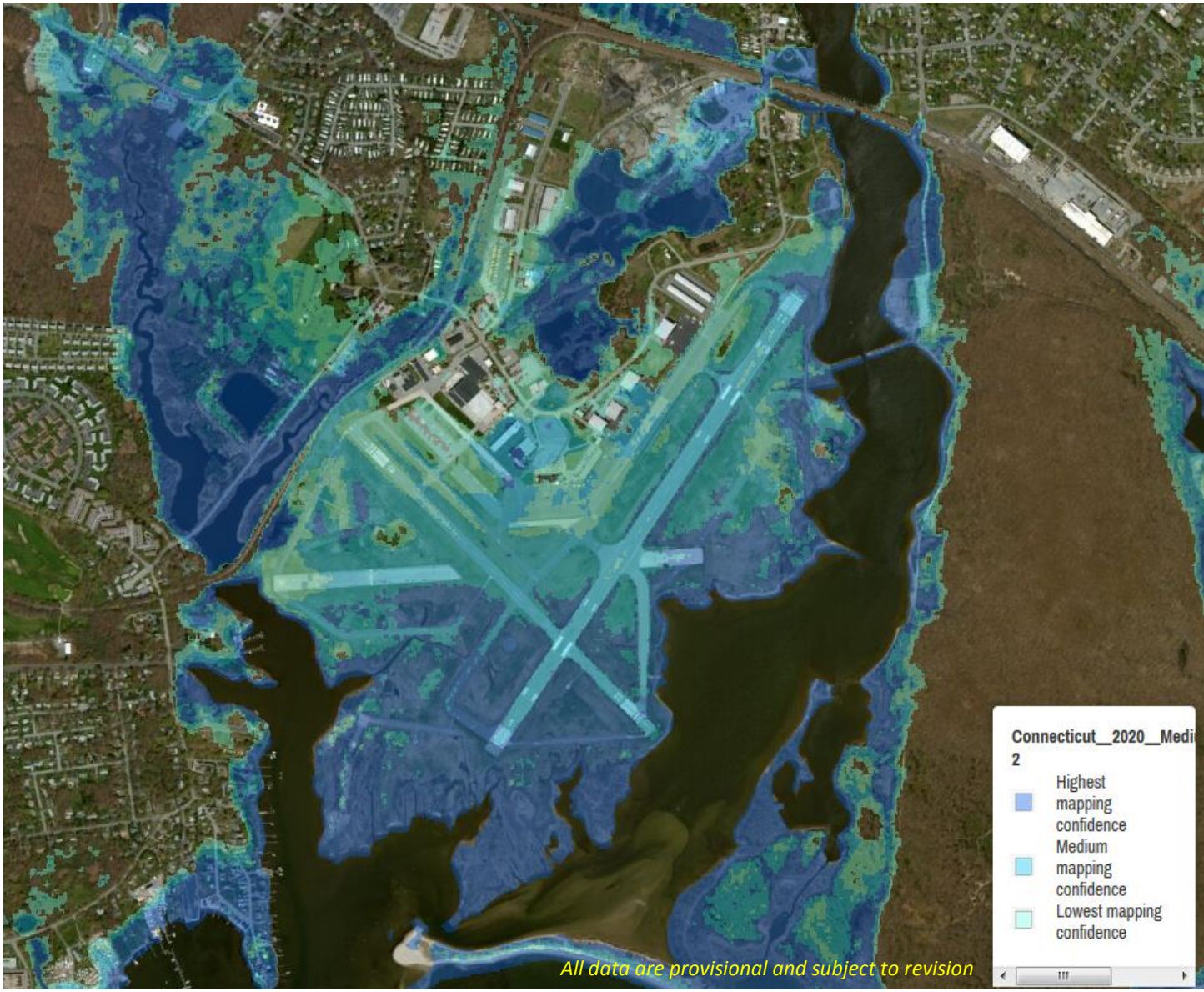
Note: The U.S. Geological Survey (USGS) deployed a temporary monitoring network of water-level and barometric pressure sensors at 224 locations along the Atlantic coast from Virginia to Maine to continuously record the timing, areal extent, and magnitude of hurricane storm tide and coastal flooding generated by Hurricane Sandy. These records were greatly supplemented by an extensive post-flood high-water mark (HWM) flagging and surveying campaign from November to December 2012 involving more than 950 HWMs.



Projected Inundation: 2020s – Daily High Tide

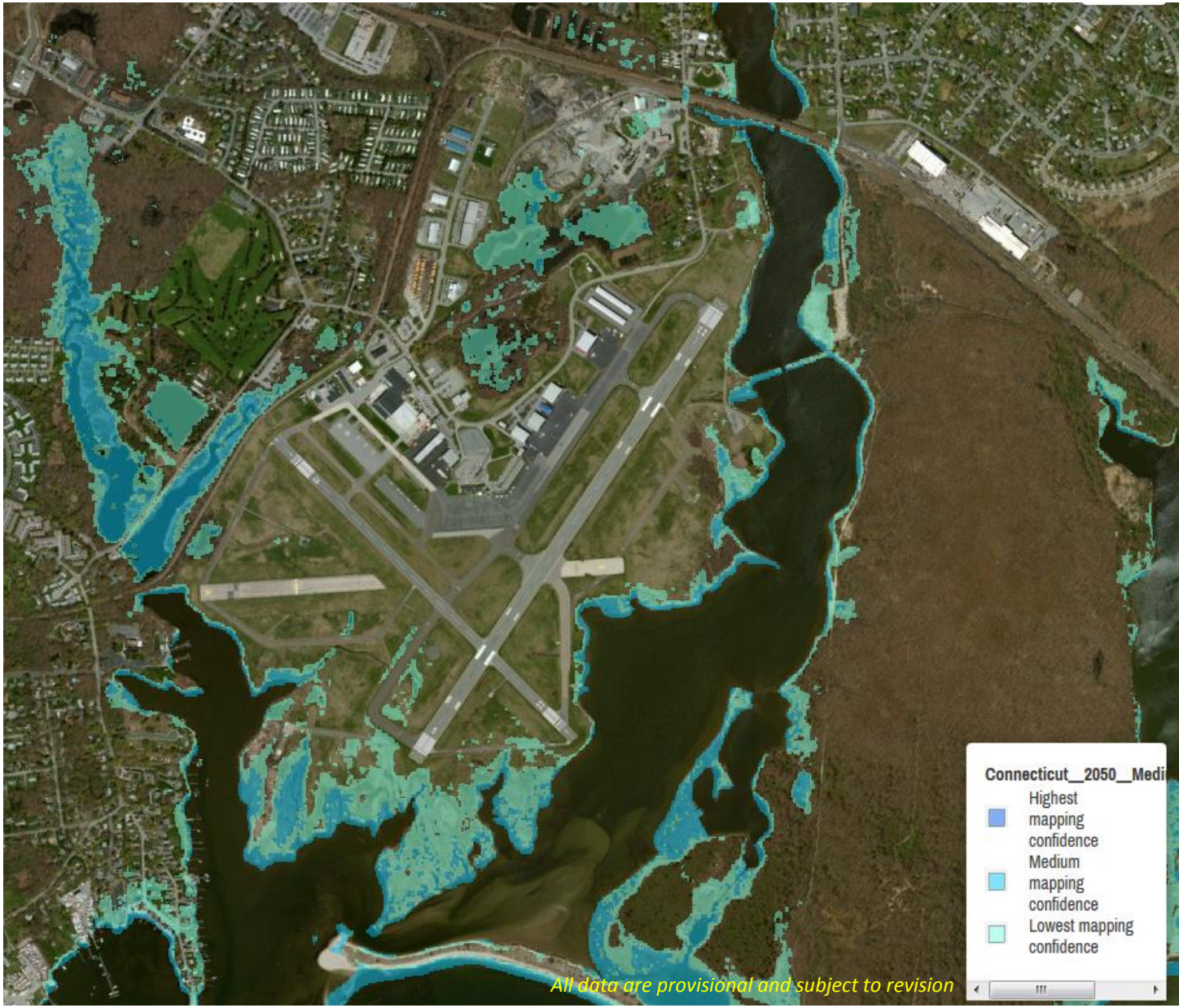
Source: Columbia University Earth Institute/NASA Goddard Institute for Space Studies/The Nature Conservancy 2013

Projected Inundation: 2020s – Category 2 Storm



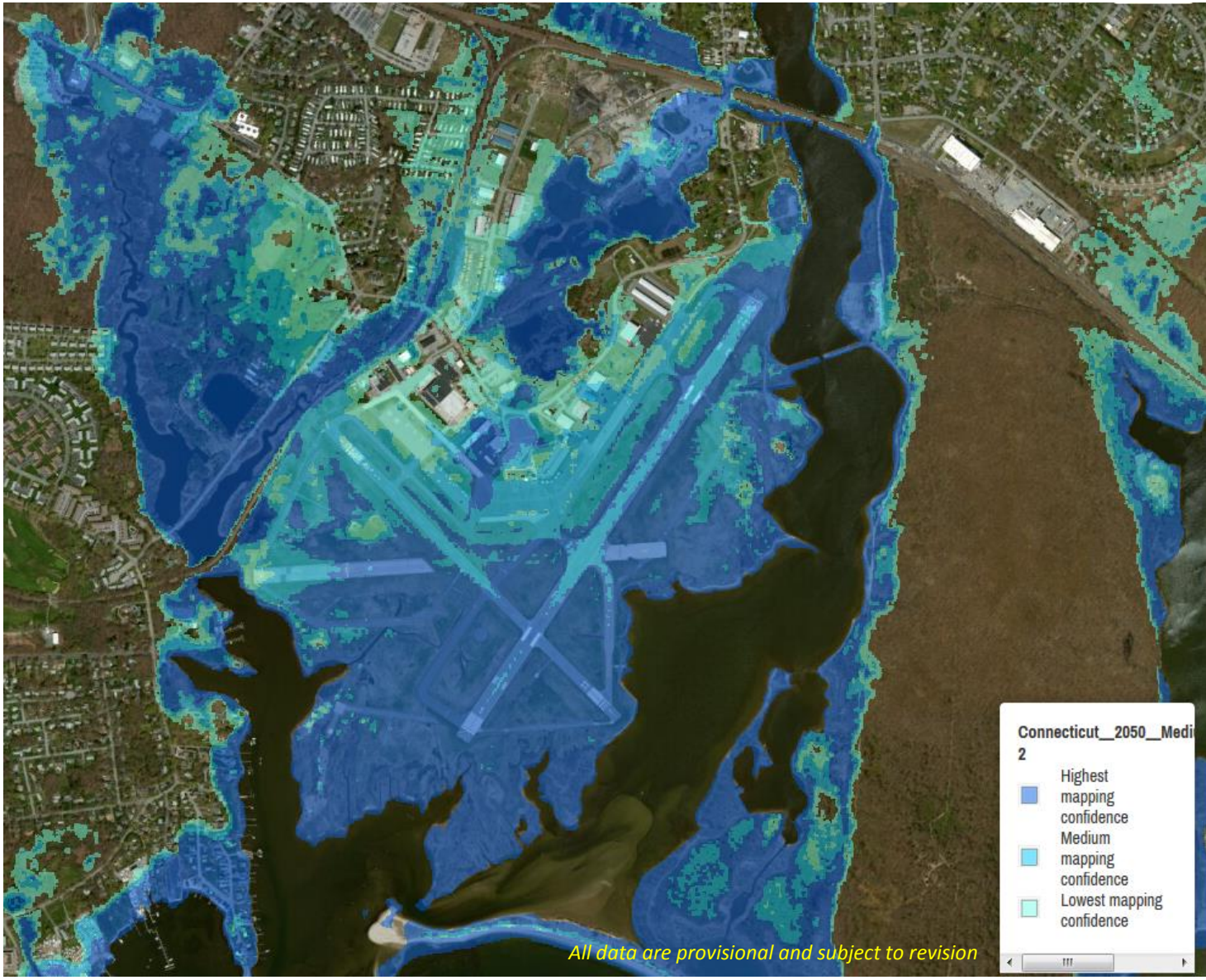
Source: Columbia University Earth Institute/NASA Goddard Institute for Space Studies/The Nature Conservancy 2013

Projected Inundation: 2050s – Daily High Tide



Source: Columbia University Earth Institute/NASA Goddard Institute for Space Studies/The Nature Conservancy 2013

Projected Inundation: 2050s – Category 2 Storm

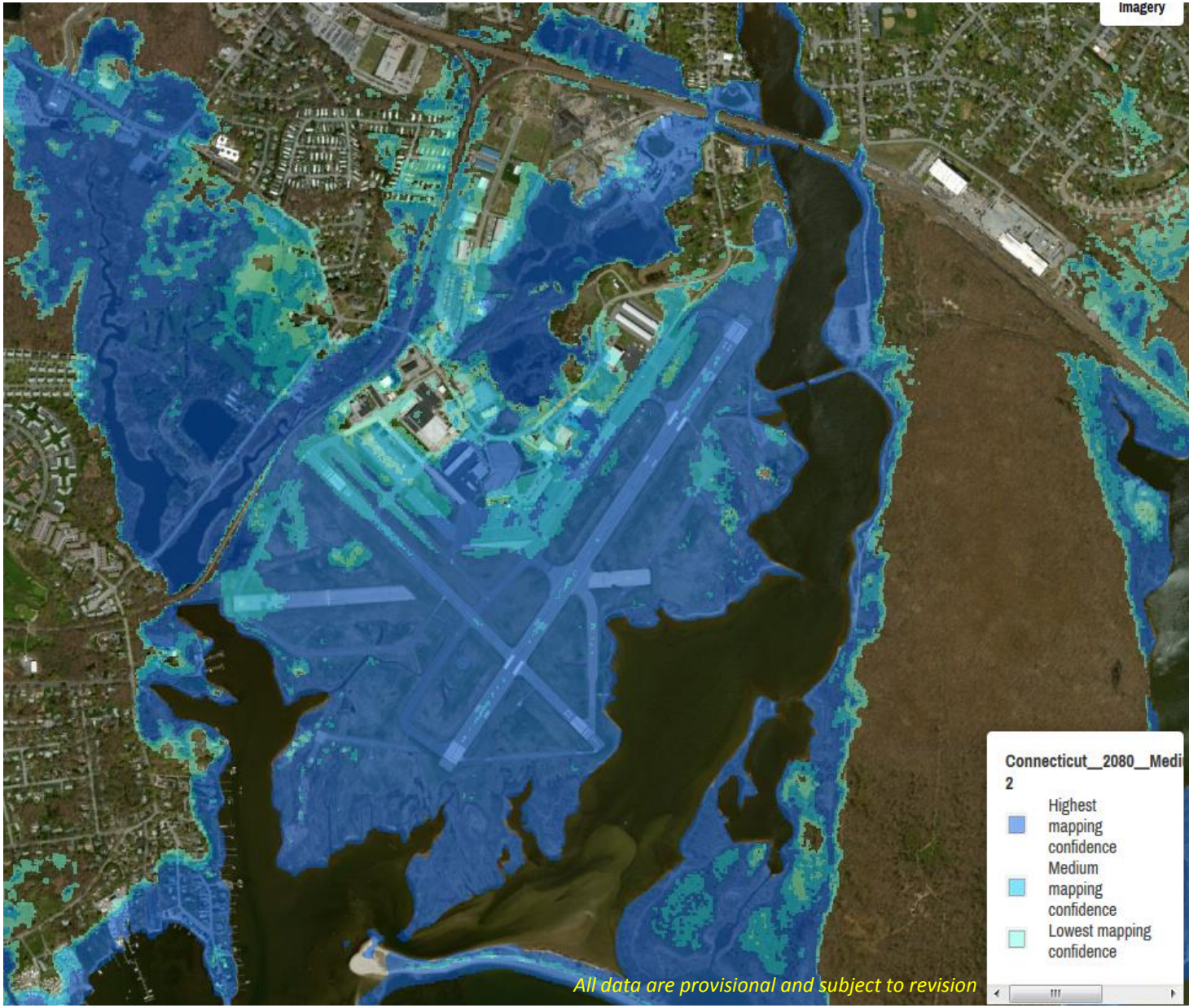


Source: Columbia University Earth Institute/NASA Goddard Institute for Space Studies/The Nature Conservancy 2013

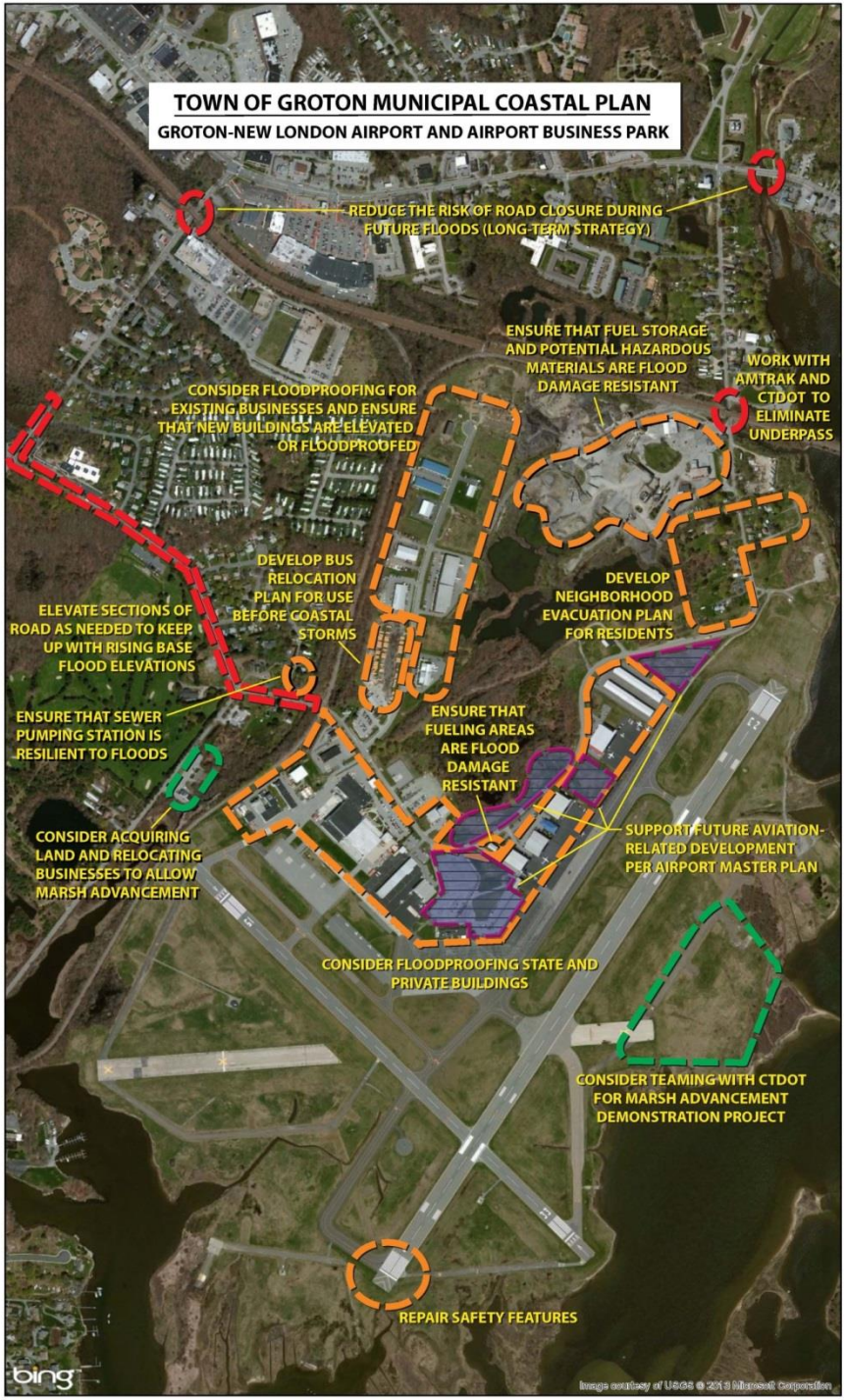
Projected Inundation: 2080s – Daily High Tide

Source: Columbia University Earth Institute/NASA Goddard Institute for Space Studies/The Nature Conservancy 2013

Projected Inundation: 2080s – Category 2 Storm



Source: Columbia University Earth Institute/NASA Goddard Institute for Space Studies/The Nature Conservancy 2013


TOWN OF GROTON MUNICIPAL COASTAL PLAN
GROTON-NEW LONDON AIRPORT AND AIRPORT BUSINESS PARK
REDUCE THE RISK OF ROAD CLOSURE DURING FUTURE FLOODS (LONG-TERM STRATEGY)
ENSURE THAT FUEL STORAGE AND POTENTIAL HAZARDOUS MATERIALS ARE FLOOD DAMAGE RESISTANT
WORK WITH AMTRAK AND CTDOT TO ELIMINATE UNDERPASS
CONSIDER FLOODPROOFING FOR EXISTING BUSINESSES AND ENSURE THAT NEW BUILDINGS ARE ELEVATED OR FLOODPROOFED
DEVELOP BUS RELOCATION PLAN FOR USE BEFORE COASTAL STORMS
DEVELOP NEIGHBORHOOD EVACUATION PLAN FOR RESIDENTS
ELEVATE SECTIONS OF ROAD AS NEEDED TO KEEP UP WITH RISING BASE FLOOD ELEVATIONS
ENSURE THAT SEWER PUMPING STATION IS RESILIENT TO FLOODS
ENSURE THAT FUELING AREAS ARE FLOOD DAMAGE RESISTANT
CONSIDER ACQUIRING LAND AND RELOCATING BUSINESSES TO ALLOW MARSH ADVANCEMENT
SUPPORT FUTURE AVIATION-RELATED DEVELOPMENT PER AIRPORT MASTER PLAN
CONSIDER FLOODPROOFING STATE AND PRIVATE BUILDINGS
CONSIDER TEAMING WITH CTDOT FOR MARSH ADVANCEMENT DEMONSTRATION PROJECT
REPAIR SAFETY FEATURES
bing
Image courtesy of USGS © 2013 Microsoft Corporation

Esker Point Beach and Park

Esker Point
LiDAR & FIRM

SOURCE(S):
DFRIM FEMA, 2013
LiDAR, 2000
CT Ortho, 2010

Figure 1-3: Esker Point

LOCATION:
Groton, CT

N

Town of Groton Plan of Conservation & Development & Municipal Coastal Program

MXD: P:\1461-08\Design\GIS\Maps\Fig1-3_EskerPoint.mxd

Map By: JDW
MMI#: 1461-08
Original: 07/30/2013
Revision: 7/31/2013
Scale: 1 inch = 500 feet

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www.miloneandmacbroom.com

Esker Point – Sandy Inundation

Note: The U.S. Geological Survey (USGS) deployed a temporary monitoring network of water-level and barometric pressure sensors at 224 locations along the Atlantic coast from Virginia to Maine to continuously record the timing, areal extent, and magnitude of hurricane storm tide and coastal flooding generated by Hurricane Sandy. These records were greatly supplemented by an extensive post-flood high-water mark (HWM) flagging and surveying campaign from November to December 2012 involving more than 950 HWMs.

SOURCE(S):
DFIRM FEMA, 2013
LiDAR, 2000
CT Ortho, 2010
USGS Sandy Mapper, 2013

Figure 2-3: Esker Point Hurricane Sandy Storm TIde Area

LOCATION: **Groton, CT**

N

Town of Groton Plan of Conservation & Development & Municipal Coastal Program

MXD: P:\1461-08\Design\GIS\Maps\Fig2-3_EskerPoint.mxd

Map By: JDW
MMI#: 1461-08
Original: 07/30/2013
Revision: 8/20/2013
Scale: 1 inch = 250 feet

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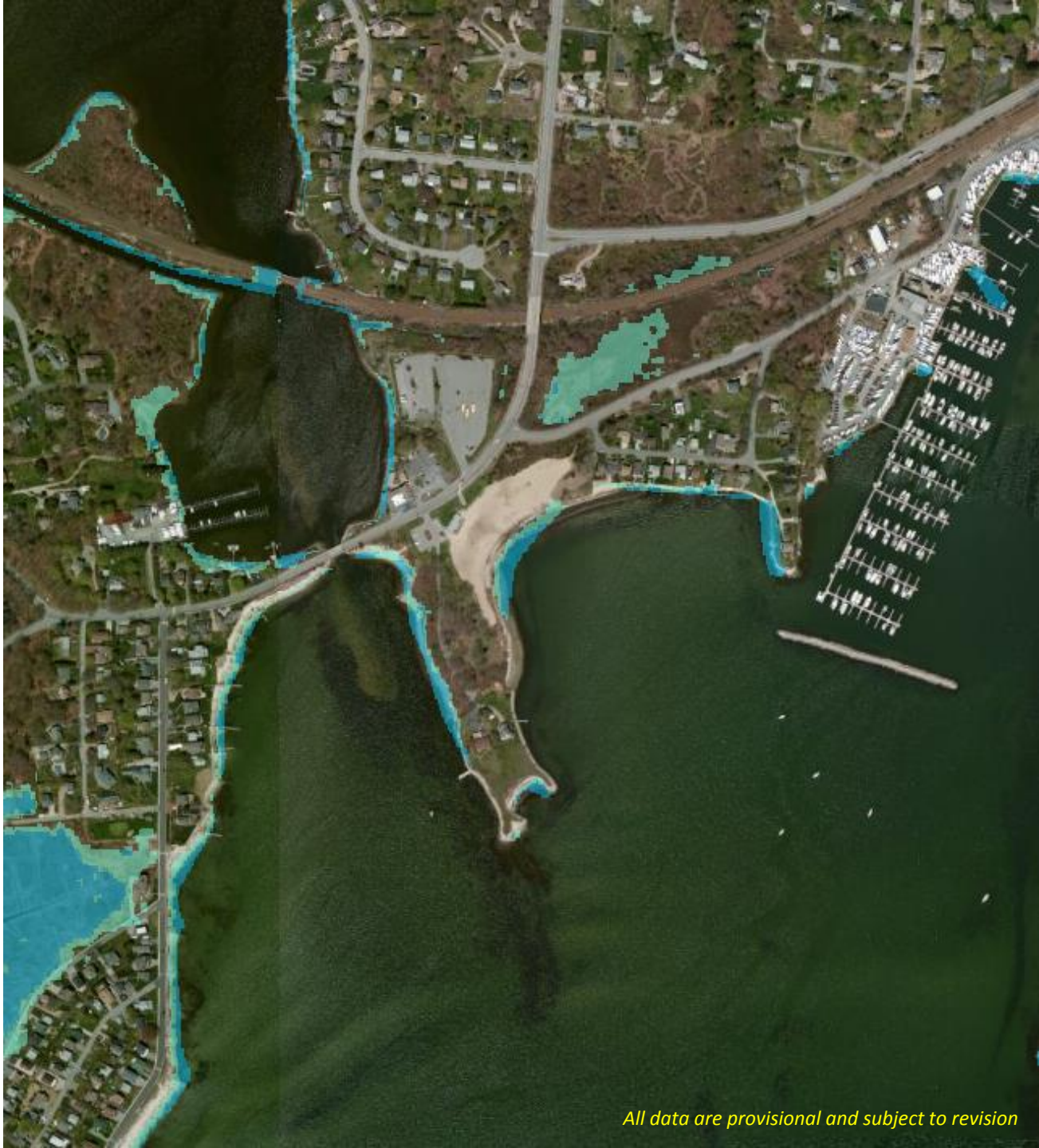
Projected Inundation: 2020s – Daily High Tide



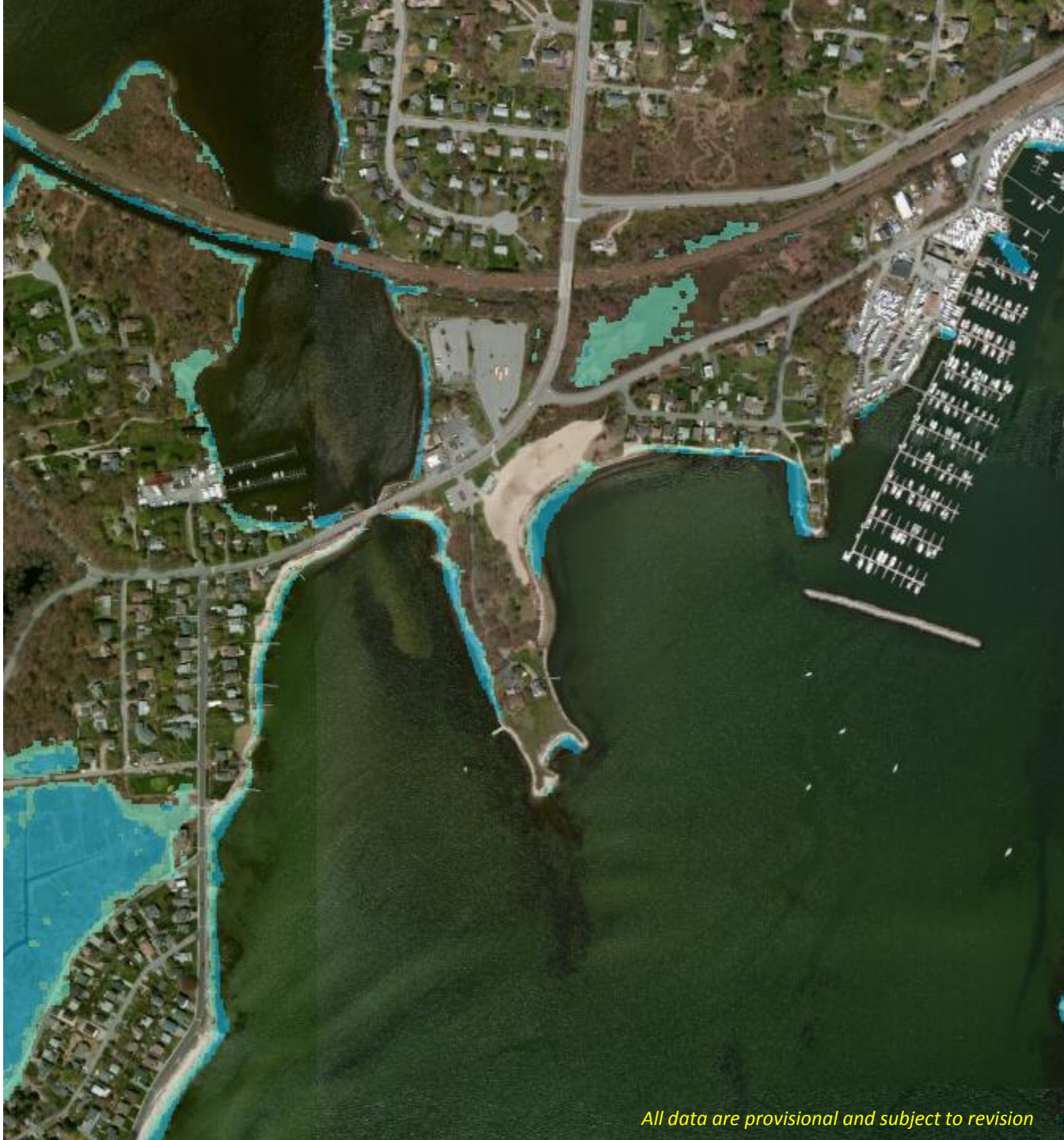
Source: Columbia University Earth Institute/NASA Goddard Institute for Space Studies/The Nature Conservancy 2013

All data are provisional and subject to revision

Projected Inundation: 2020s – Category 2 Storm

Source: Columbia University Earth Institute/NASA Goddard Institute for Space Studies/The Nature Conservancy 2013

Projected Inundation: 2050s – Daily High Tide

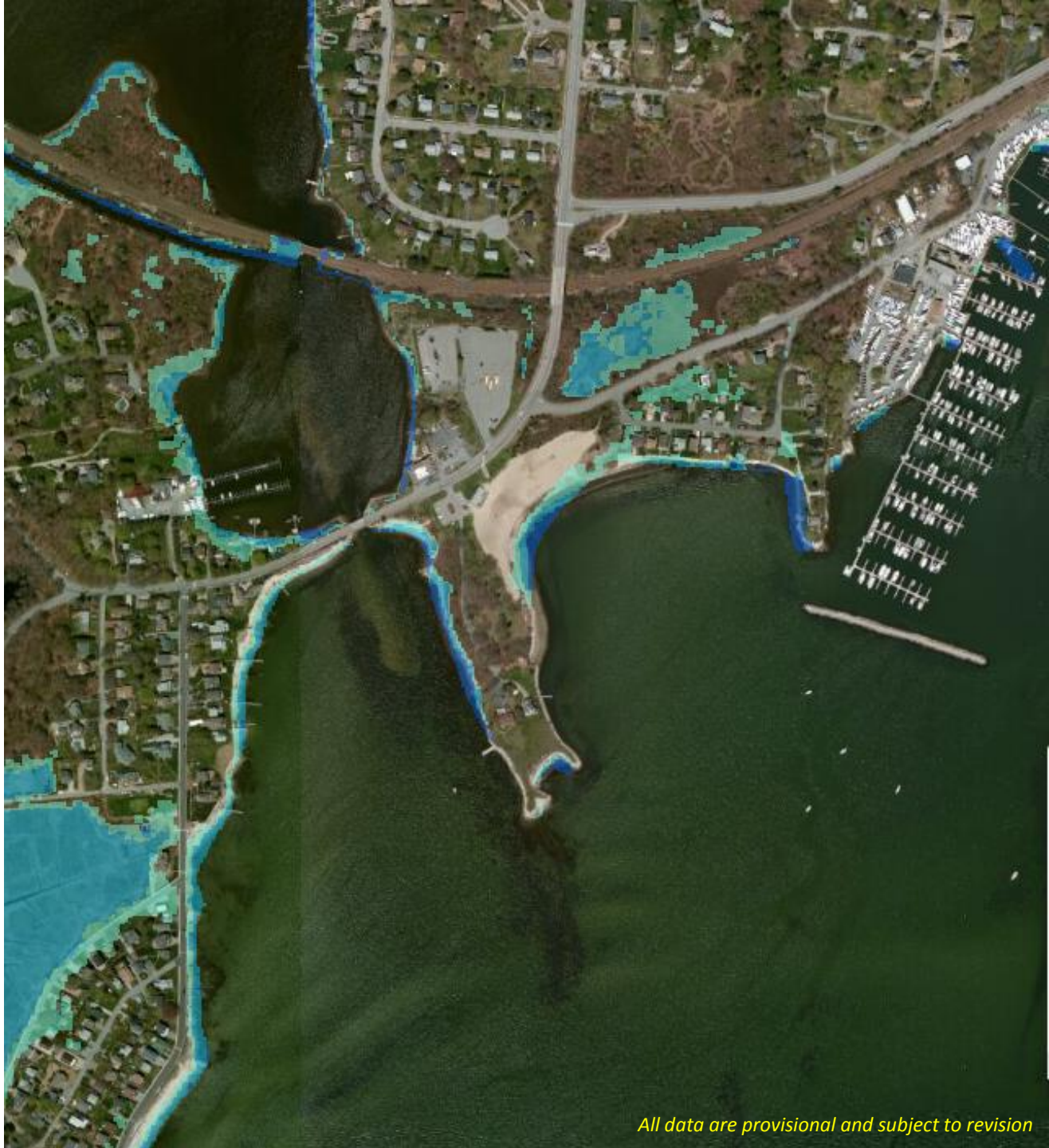


Source: Columbia University Earth Institute/NASA Goddard Institute for Space Studies/The Nature Conservancy 2013

Projected Inundation: 2050s – Category 2 Storm

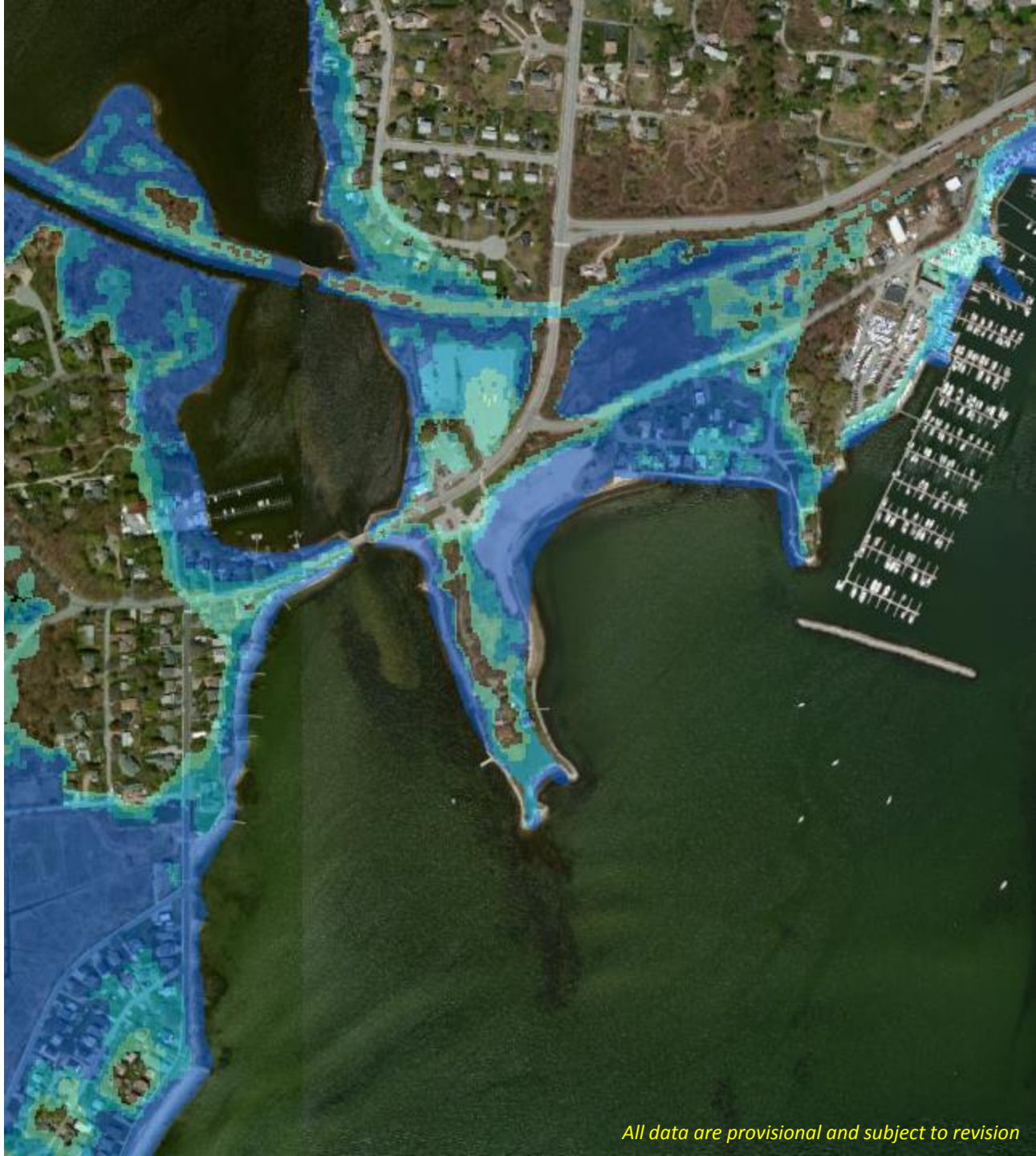
Source: Columbia University Earth Institute/NASA Goddard Institute for Space Studies/The Nature Conservancy 2013

Projected Inundation: 2080s – Daily High Tide



Source: Columbia University Earth Institute/NASA Goddard Institute for Space Studies/The Nature Conservancy 2013

Projected Inundation: 2080s – Category 2 Storm



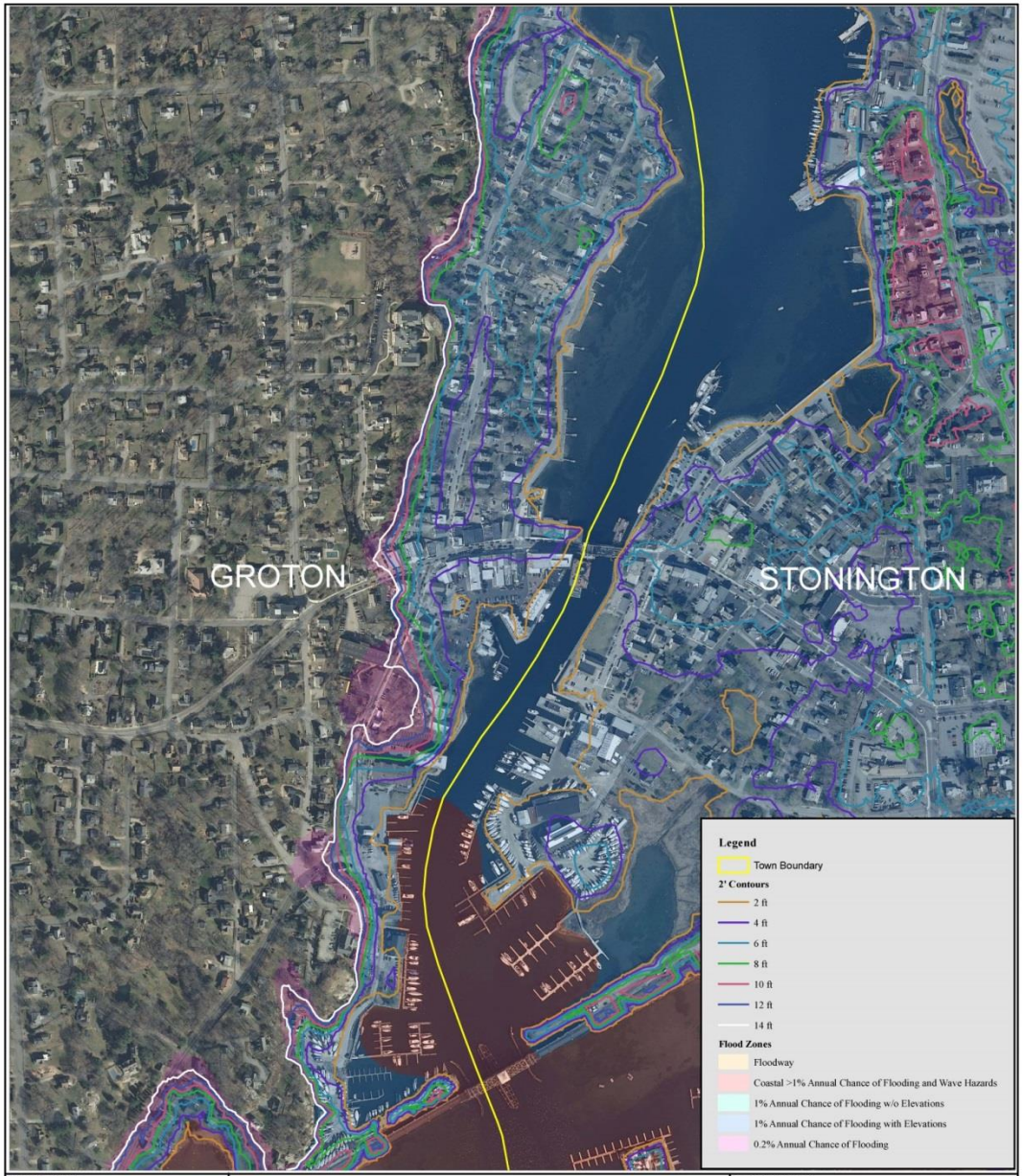
Source: Columbia University Earth Institute/NASA Goddard Institute for Space Studies/The Nature Conservancy 2013

All data are provisional and subject to revision


ADD RESILIENT AMENITIES SUCH AS PLAYGROUNDS, PICNIC SHELTER, AND INTERPRETIVE SIGNAGE
IMPROVE CIRCULATION; ADD LANDSCAPED ISLANDS TO DELINEATE SPACES AND REDUCE IMPERVIOUS SURFACES; CONSIDER REPLACING ASPHALT WITH PERVIOUS PARKING SURFACES TO FURTHER REDUCE IMPERVIOUSNESS
STABILIZE ERODING MARSH EDGES
STABILIZE ERODING SHORELINE
MAINTAIN BOAT RAMP
WET FLOODPROOF OR ELEVATE BATHHOUSE AND REMODEL OR IMPROVE THE EXTERIOR
RENOURISH WITH SAND AS NEEDED
UPGRADE BRIDGE AND ELEVATE ROAD AS NEEDED TO KEEP UP WITH RISING SEA LEVEL AND BASE FLOOD ELEVATION
CONSIDER DEVELOPMENT OF SAND BEACH, SUBJECT TO A DETERMINATION THAT LONGSHORE MIGRATION WILL NOT ADVERSELY IMPACT OTHER AREAS
TOWN OF GROTON MUNICIPAL COASTAL PLAN
ESKER POINT BEACH AND ESKER POINT WATERFRONT PARK
bing
Image courtesy of USGS © 2013 Microsoft Corporation

Mystic

Mystic LiDAR & FIRM



SOURCE(S):
DFRIM FEMA, 2013
LiDAR, 2000
CT Ortho, 2010

Figure 1-1: Mystic

LOCATION:
Groton, CT

N

Town of Groton Plan of Conservation & Development & Municipal Coastal Program

MXD: P:\1461-08\Design\GIS\Maps\Fig1-1_Mystic.mxd

Map By: JDW
MMI#: 1461-08
Original: 07/30/2013
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Mystic – Sandy Inundation

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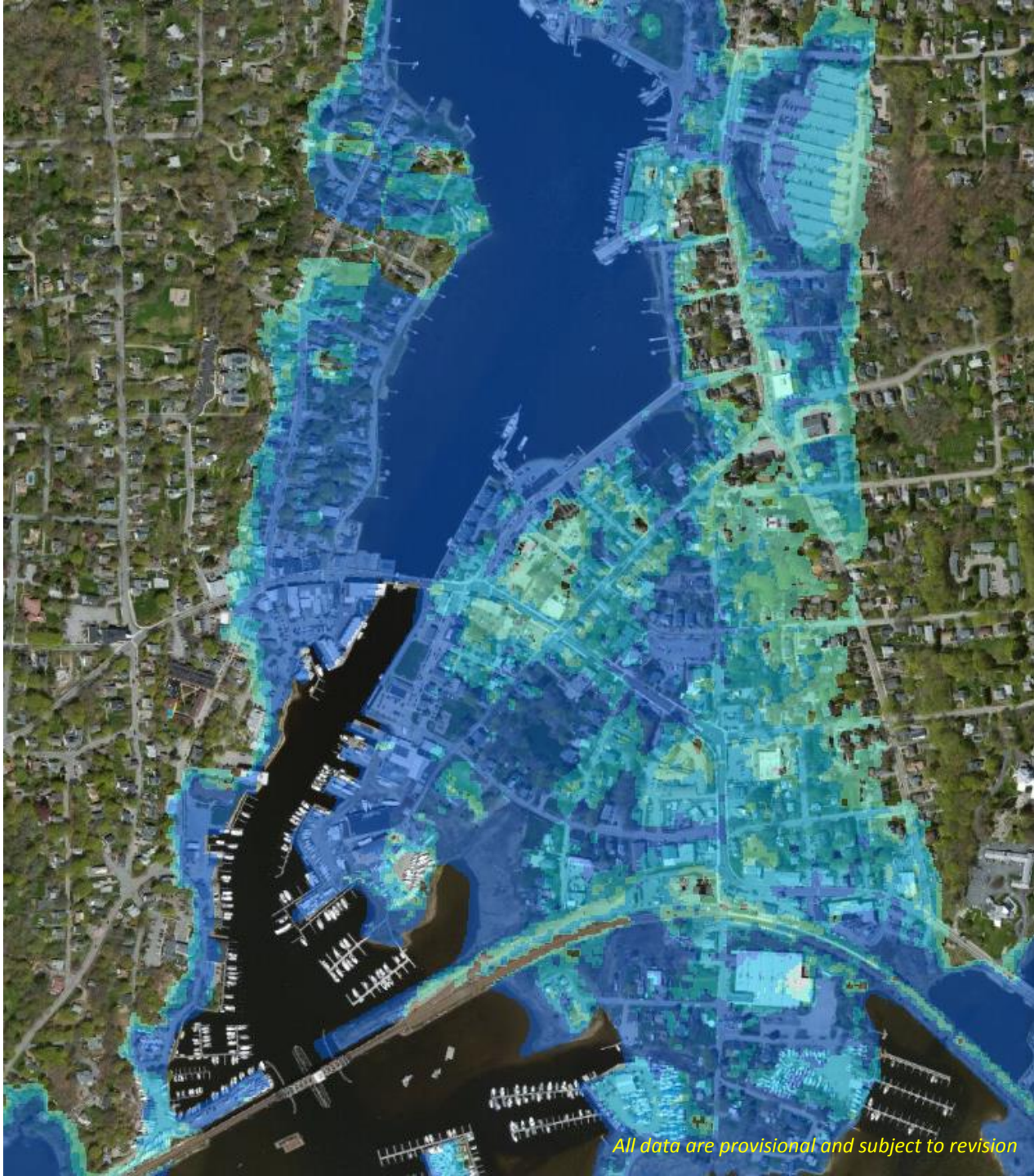
Projected Inundation: 2020s – Daily High Tide

Source: Columbia University Earth Institute/NASA Goddard Institute for Space Studies/The Nature Conservancy 2013

Projected Inundation: 2020s – Category 2 Storm

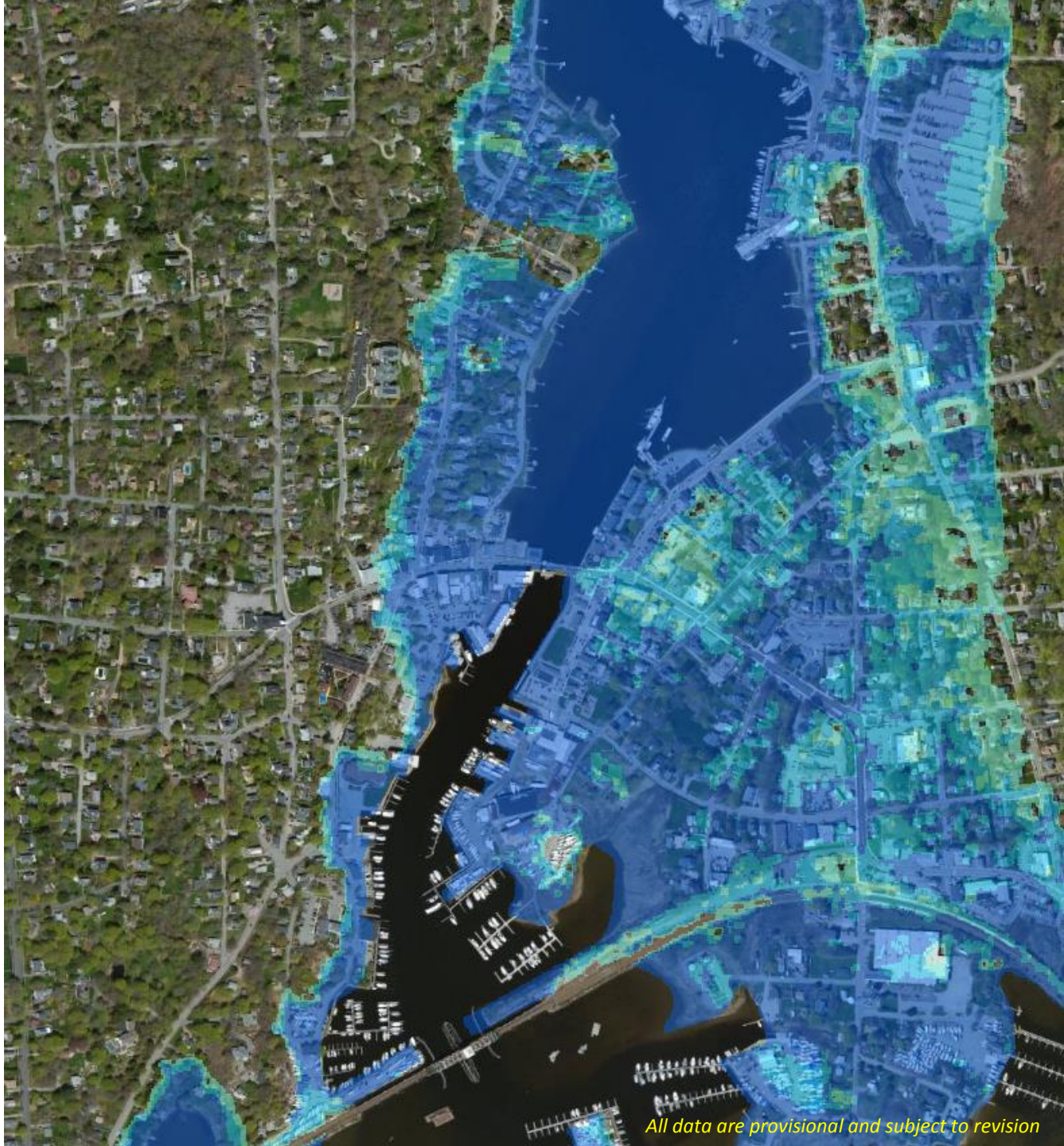


Source: Columbia University Earth Institute/NASA Goddard Institute for Space Studies/The Nature Conservancy 2013

Projected Inundation: 2050s – Daily High Tide

Source: Columbia University Earth Institute/NASA Goddard Institute for Space Studies/The Nature Conservancy 2013

Projected Inundation: 2050s – Category 2 Storm



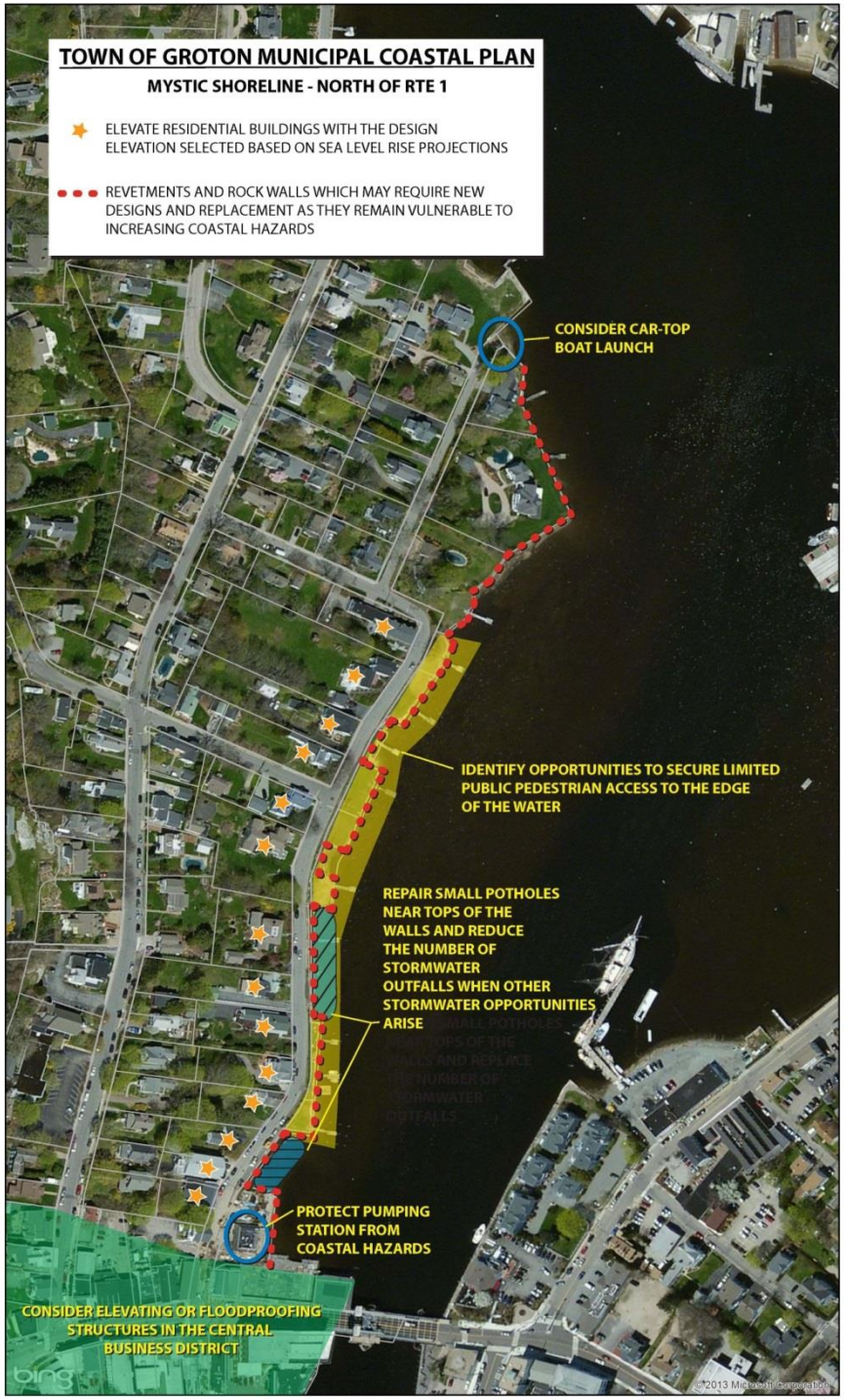
Source: Columbia University Earth Institute/NASA Goddard Institute for Space Studies/The Nature Conservancy 2013

Projected Inundation: 2080s – Daily High Tide

Source: Columbia University Earth Institute/NASA Goddard Institute for Space Studies/The Nature Conservancy 2013

Projected Inundation: 2080s – Category 2 Storm

Source: Columbia University Earth Institute/NASA Goddard Institute for Space Studies/The Nature Conservancy 2013


TOWN OF GROTON MUNICIPAL COASTAL PLAN
MYSTIC SHORELINE - NORTH OF RTE 1
ELEVATE RESIDENTIAL BUILDINGS WITH THE DESIGN ELEVATION SELECTED BASED ON SEA LEVEL RISE PROJECTIONS
REVETMENTS AND ROCK WALLS WHICH MAY REQUIRE NEW DESIGNS AND REPLACEMENT AS THEY REMAIN VULNERABLE TO INCREASING COASTAL HAZARDS
CONSIDER CAR-TOP BOAT LAUNCH
IDENTIFY OPPORTUNITIES TO SECURE LIMITED PUBLIC PEDESTRIAN ACCESS TO THE EDGE OF THE WATER
REPAIR SMALL POTHOLES NEAR TOPS OF THE WALLS AND REDUCE THE NUMBER OF STORMWATER OUTFALLS WHEN OTHER STORMWATER OPPORTUNITIES ARISE
PROTECT PUMPING STATION FROM COASTAL HAZARDS
CONSIDER ELEVATING OR FLOODPROOFING STRUCTURES IN THE CENTRAL BUSINESS DISTRICT
bing
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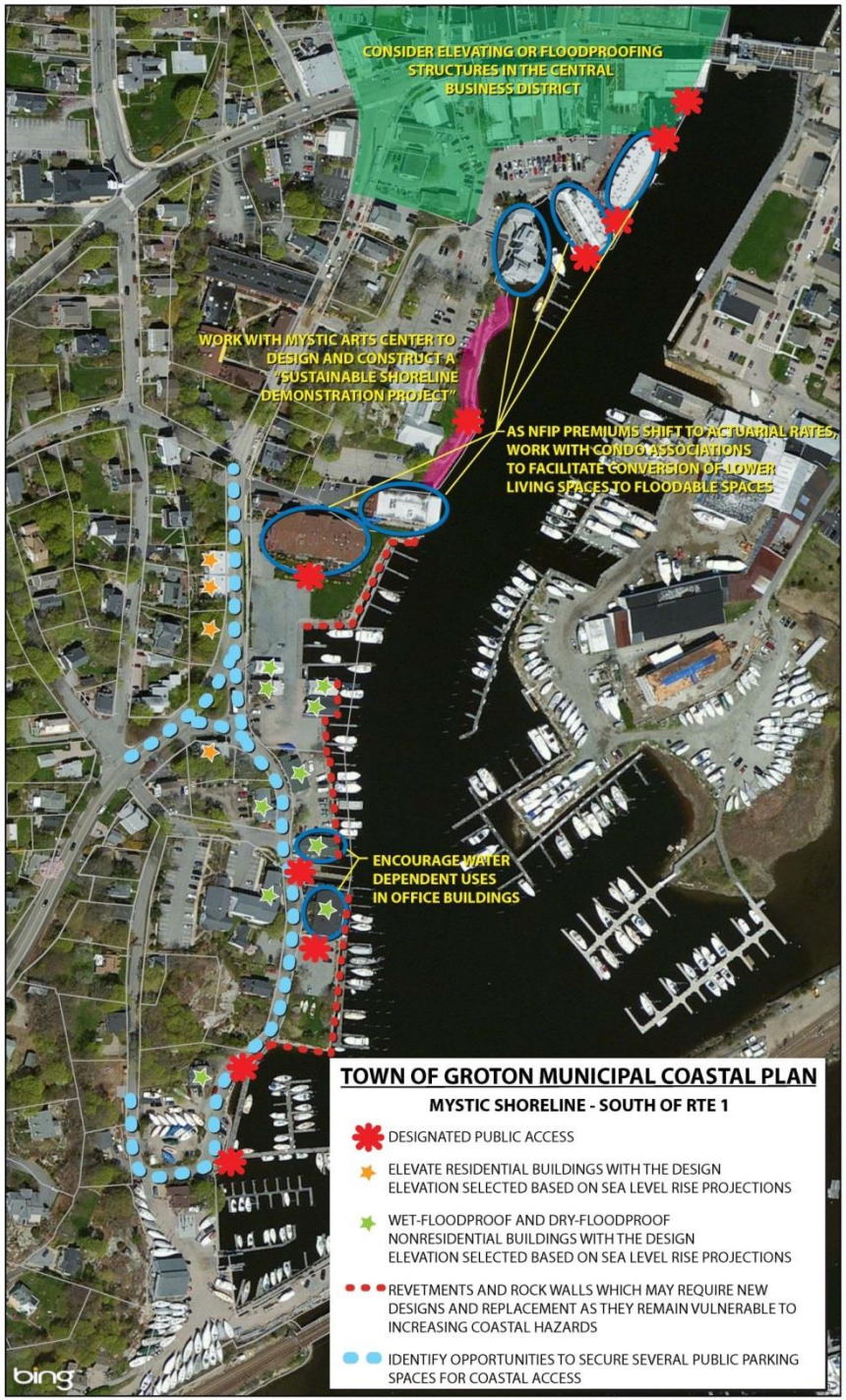
CONSIDER ELEVATING OR FLOODPROOFING STRUCTURES IN THE CENTRAL BUSINESS DISTRICT
WORK WITH MYSTIC ARTS CENTER TO DESIGN AND CONSTRUCT A "SUSTAINABLE SHORELINE DEMONSTRATION PROJECT"
AS NFIP PREMIUMS SHIFT TO ACTUARIAL RATES, WORK WITH CONDO ASSOCIATIONS TO FACILITATE CONVERSION OF LOWER LIVING SPACES TO FLOODABLE SPACES
ENCOURAGE WATER DEPENDENT USES IN OFFICE BUILDINGS
bing
TOWN OF GROTON MUNICIPAL COASTAL PLAN
MYSTIC SHORELINE - SOUTH OF RTE 1
DESIGNATED PUBLIC ACCESS
ELEVATE RESIDENTIAL BUILDINGS WITH THE DESIGN ELEVATION SELECTED BASED ON SEA LEVEL RISE PROJECTIONS
WET-FLOODPROOF AND DRY-FLOODPROOF NONRESIDENTIAL BUILDINGS WITH THE DESIGN ELEVATION SELECTED BASED ON SEA LEVEL RISE PROJECTIONS
REVETMENTS AND ROCK WALLS WHICH MAY REQUIRE NEW DESIGNS AND REPLACEMENT AS THEY REMAIN VULNERABLE TO INCREASING COASTAL HAZARDS
IDENTIFY OPPORTUNITIES TO SECURE SEVERAL PUBLIC PARKING SPACES FOR COASTAL ACCESS

Questions and Comments?